Electrical Times

VOLUME 155

1969
January to June

The ELECTRICAL TIMES Ltd
Dorset House, Stamford Street,
London S.E.1.

INFORMATION FOR LIBRARIANS

Each issue in this volume was numbered from page one, except for the second issue. Pages are identified by the issue number (below) and the page number in it.

Date	Number	Date	Number	Date	Number
2 January	1	6 March	10	8 May	19
9 January	2	13 March	11	15 May	20
16 January	3	20 March	12	22 May	21
23 January	4	27 March	13	29 May	22
30 January	5	3 April	14	5 June	23
6 February	6	10 April	15	12 June	24
13 February	7	17 April	16	19 June	25
20 February	8	24 April	17	26 June	26
27 February	9	1 May	18		

SPECIAL SECTIONS AND SUPPLEMENTS

Issue No.	Title	Begins facing page
3	Focus on Medium Voltage Switchgear	48
9	Focus on Standby Supplies	52
10	Electrical Groups and Associated Companies	Separate booklet
13	Focus on Metrication	52
15	Selecting Installation Tools	Separate booklet
17	Focus on Distribution Cables	50
24	Focus on Power Stations	48
26	Focus on Safety from Explosion	50

The Focus special sections are numbered separately from the main issue. Articles in Focus are entered in the main index by issue number and Focus page number.

INDEX TO VOLUME 155

January to June 1969

Accessories:
Call for larger screws, 23-15.
Accounts:
Building (letter), 11-11.
Air-conditioning:
Energy sales increase, 8-4.
Air cushion transporters:
CEGB experience, 21-5.
All-electric village:
Summercombe, SWEB, 26-7.
Airports:
Heathrow, Terminal 1, 17-52.
Alarms:
Buccholz, 3-10.
Alkaline cells:
For standby power, 9-Focus 27.
Alternators:
Induction excited, 22-11.
Aluminium:
High purity production in USA, 12-15. Shaping with magnetic fields, 17-15.
Ammeters:
Discreet electronic, 5-11.
Ammonia:
From nitrogen, 2-45.
Appliances:
EFTA tests, 7-3. Harrogate review, 5-60. Norweb sales for 1968-69, 18-5. Testing, expansion of Leatherhead laboratory, 21-55.
Association of Short Circuit Testing:
Tests of miniature c.b's, 7-3.
Association of Supervisory and Executive Engineers:
Annual dinner speech on scope, 17-13. Contracting section formed, 22-5. Name change, 19-3. Title change proposal (letter), 14-11. Title change proposal, 9-3.
Atomic Weapons Research Establishment:
Total energy scheme, 24-5.
Australia:
Order for propulsion equipment to GEC, 5-8. Queensland, Commission's progress and plans, 3-52. Snowey mountains scheme progress, 10-64. Victoria Report 1967-68, 6-62.
Authors:
Allen, P. H. G., Computer aided design and the power engineer ... 21-46
Anil Kumar, N. M., Fast three-step solid-state distance relay 2-63
Armstrong, A. M., Changing emphasis in control and instrumentation 24-Focus 21
Atkinson, G. D., Earthing policy of an area board 25-52
Bagshaw, J. R., Research reduces cost and size 3-Focus 25
Bagshaw, N. E., Fuel cells present and future 9-Focus 12
Bagdzinski, I., Current ratings of distribution cables 17-Focus 3
Baker, R. V., Static power systems for computer continuity 9-Focus 22
Beddoes, S., Industrial air break c.b's for heavy duty 3-Focus 15
Berryman, A. W., Quantity Surveyor's views on Bills of Quantities 10-73
Bold, Mrs. T., Cleaner convenience cooking by electricity 5-46
Bolton, B., Discharge in insulation... 2-61
Bone, J. C. H., Trends in auxiliary drives 24-Focus 15
Brown, A. G. C., An industrial engineer looks at metrication 13-Focus 9
Carter, A. O., Electrical aids to safety 8-66
Clark, T. J., UK contractors offer competitiveness and quality overseas 18-18
Cohen, J. G., Late equipment deliveries to site—the contractors bane 22-62
Crisp, J., Safe electricity supplies for construction sites 22-59
Dale, L. D., Trends in gas turbine and diesel plant 9-Focus 5
Denham, G. T., Distribution cable accessories 4-54, 6-58
Dixon, G. F. L., Earthing policy of an area board 25-52
Dobie, W. C., Selling electricity to industry 3-46
Dodd, G. E., Industrial engineers look at metrication Focus 13 19
Ellison, A. J., Computer as an electrical machine design aid ... 13-50, 14-46
Fairney, W., Thyristor excitation—large set pilot scheme 11-52
Feenan, C. J., Compactness the aim of fuse switch Focus 3 9
Ferns, J. L., Legislation could cut supply costs 11-57
Finney, D., Thyristor excitation of large generators 15-40
Flack, R. F., Application for eddy current couplings 16-52
Gray, A., Sugar factory installation in Northern Iran 18-78
Haddock, J. B. S., Control by miniature and moulded case breakers 3-Focus 21
Hambley, N., Heavy neutral currents from thyristor controls 25-61
Harrison, R. J., Applying the term contract to substation building ... 20-60
Harry, Dr. J. E., Developments in electrical process heating... ... 23-46
Hawley, R., Turbo-type generators of the future 24-Focus 6
Hodge, D., Packaged power for world markets 18-101
Hollingsworth, P. M., Cables and metrication—the BICC policy 13-Focus 13
Honey, P., Using the white meter tariff 12-57
Horne, C. P. T., Industrial engineers look at metrication 13-Focus 19
Houston, J. D., JIB independent chairman talks to the *Electrical Times*... 22-68
Inglis, J. P., Installation Contracting 1-25
Jack, C. R., Routine testing ir service i.d.m.t. relays 12-65
Jones, A. P., Quick and accurate testing for m.c.b's 10-61
Kennedy, M.W., Limiting radio interference from h.v. lines ... 19-56, 20-62
Kidd, W. L., Distribution systems—planning and reliability 26-54
Lewis, K., Towards higher productivity in electrical installations ... 22-72
Lindley, Dr. B., Electrical Research... 1-31
Lloyd, L. J., Switchgear for auxiliaries in power stations 24-Focus 12
Maires, R., Static invertors for emergency power 9-Focus 19
Mee, D. G., Testing and certification 3-Focus 29
Morgan, D., Automatic photometry for the lamp industry 25-64
Norvic, P. R., Industrial air break c.b's for heavy duty 3-Focus 15
Ottmann, P. A., Group service units cut on-site service costs 24-50
Palmer, K. N., Flame arrester for pressure relief 26-Focus 15
Parker, A. J. K., Electrical contractors meet in Eastbourne conference 23-51
Preston, L. L., Transformers for e.h.v. systems 18-93
Ratcliffe, G., Developing cable joints and terminations 17-Focus 23
Riddlestone, H. G., The changing pattern of research 26-Focus 9
Ridley, G. K., 140 MVA water wheel generator site testing 7-54
Rotherham, Dr. L., Supply industry research benefits overseas buyers 18-72
Rutherford, R., Research reduces cost and size 3-Focus 23
Rye, J., Developing cable joints and terminations 17-Focus 23
Sanson, T. B., Design economics of an industrial power station ... 12-52
Selar, I., Scottish experience supports Bills of Quantities 9-50
Sharples, W. K., Heating a factory by Electricaire 6-56
Sheppard, H. J., Distribution systems planning and reliability ... 26-54
Smith, B. H., Ferroresonant parametric machines 21-49

Smith, D., Automatic photometry for the lamp industry 25-64
Soper, J. A., Divided winding rotor aids large set leading p.f. operation 16-52
Steward, S. F., Manufacturing, confidence in long term future ... 1-22
Sutton, C. T. W., Plastics cable insulation 17-Focus 9
Taylor, C. B., Choosing MV switchgear 3-Focus 3
Twardzicki, A., Computer as an electrical machine design aid ... 14-46
Vickers, J. S., Metrication problems and opportunities 13-Focus 3
Walker, J. R., Industrial relations in the electrical contracting industry 23-48
Wall, R. A., Communicating product information 16-63, 17-56
Wells, R., Two pulse, single way rectifier characteristics 2-58
Wood, A. B., Limiting radio interference from h.v. lines ... 19-56, 20-62
Wraith, C. P. R., Static power systems for computer continuity 9-Focus 22

Automatic driving:
Ford experiments, 4-11.
Automation:
Tile plant, 26-52.
Auto reclosing:
One-place operation, 6-15. Rural networks, 13-53.

Batteries:
Zinc-air, 6-15.
Bearings:
Demagnetised, 12-15. Hoffman irregularity assessor, 6-66.
Board of Trade:
Anti-dumping of Italian washers, 4-3. Design council assistance for, 25-5. Engineering stocks figures, 1-8. Handbook on exporting, 20-5. Imports watched, 7-7. Resale price recommendations, 3-5. Restrictive trade practices act, first order, 10-3. Talks with BLI, 2-38.
Boilers:
Demand for pressure vessels, 5-7. Drum modification at Cockenzie station, 22-93. Explosion at Brimsdown 'B', 4-5.
Breweries:
Luton, controls installed, 23-56.
British Approvals Service for Electrical Equipment in Flammable Atmosphere:
Guide issued, 2-38.
British Calibration Service:
Extends scope, 10-9.
British Coal Utilisation Research Association:
Annual report for 1968, 19-66.
British Electrical and Allied Manufacturer's Association:
Annual report for 1968-69, 11-69. Appliance makers reception, 3-3. BDA Resignation, 1-3. Directors comments on industrial achievement, 11-3. Exports forecast for 1969, 13-3. Guide to Industrial Electronic Equipment, 25-14. Independence sought by appliance firm, 19-3. Publicity conference, 24-5. Transformers, noise measurement booklet, 19-11.
British Electrical Approvals Board:
Safety study of household appliances, 22-7.
British Leyland:
Austin Maxi production control, 20-59.
British Rail:
Crewe to Glasgow line reorganisation, 19-11.
British Standards Institution:
Change to metric programme, 4-7. Exporting, technical help pubs, 10-10. Technical help to exporters. W. Germany and Finland, 12-9. Technical help to exporters publication Sweden, W. Germany, S. Africa, 21-4. Women's Advisory Committee—spares service, 3-5.
Building:
Government research, 25-65.
Bulgaria:
Energy generation, 16-62.
Busbars:
Aluminium, jointing of, 13-24. Aluminium, rating, 18-15.

Cables:
Aluminium conductor, saving from, 3-49, Catenary uses for, 9-55. Cable accessories. 6-58. Distribution, current ratings, 17-Focus 3. Distribution network designs. 4-54. HV, Ontario Hydro back-filling, 11-12, Jointing and termination, 17-Focus, 23. Plastics insulation, 17-Focus 9. Post Office ducting savings, 22-11. Rationalisation talks, 22-3. Research needs, IEE paper, 19-65. Sodium, USA report, 6-13.
Canada:
Bruce Station, British orders for Bruce Station Ontario, 4-19. OH line vibration, 19-13.
Capacitors:
Thin films for, 17-15.
Caravans:
Electric shock dangers, 18-14.
Carbon:
Pyrolytic carbon production, 3-10.
Cars:
Austin Maxi production control, 20-59.
CEGB:
Administration merger, 7-3. Air cushion transporter, 21-5. Bulk tariffs, 13-3. December plant additions, 4-5. Delays in power station programme, 13-57. Designing support recommendations, 26-5. Device for current and voltage measurement, 14-13. Energy prices drop forecast, 11-4.
Fast Nuclear reactor considerations, 5-5. Govt. aid for plant sought, 23-3. Installed capacity for 1973, 6-3. Interest in h.t.g.r's, 22-3. London, three stations required, 13-4. Metrication plans, 21-5. Ombudsman and o.h. line, 2-38. Power stations review, 18-11. Redundancy pay, SEB, decision, 20-3. Severn/Wye 400 kV tunnel, 22-5.
Supergrid, 15-45. Supply staff pay rise, 6-3. Wooden towers, USA opinion 5-5.
CEGB stations:
Aberthaw, 1-5. Blyth B, 26-10. Brimsdown, 4-5. Chapelcross reactor breakdown, 6-5. Cockenzie, 2-37, 22-93. Cockenzie shut down, 6-4. Cornwall site survey ended, 2-38. Cottam, 16-5. Dungerness 'B' delayed, 8-3. Dounray, 13-4. Drax, 21-16. Drax B, 13-4. Drax, 24- Focus 3. Drax, coal costs, 18-3.
Dungeness 'B', 1-8. Dungeness 'B', 14-4. Fiddler's ferry, 23-5. Hartlepool, 1-5. Hartlepool, 19-4. Landguard, 1-5. Landguard Point site considered, 19-4. Lord Roben's comment, 12-4. Oldham, 24-52. Pinkston, 4-5. Ratcliffe, 7-5. Ratcliffe, 17-11. Shoreham station considered, 6-5. Site in Devon or Cornwall, 19-4. Tilbury, pump commissioned, 6-4. Thorpe Marsh, 2-38. West Burton, official opening, 17-48. Wilson Committee report, 12-4. Wylfa, 1-8.
Council of Engineering Institutions:
Structure reorganisation suggestions, 21-6.
Cells:
Alkaline, 9-Focus 27.
CERL:
Arcing over water, 8-13. Insulator tests, 16-66. Preparation for 1 MV transmission, 26-48. Transients, measurement at h.v., 9-14.
Chemicals:
ICI Dumfries Plant, 8-7.
Cigarette Lighters:
Electric, 12-15.
Circuit breakers:
Air-break, current limiting (letter), 6-13. Assoc. of short circuit testing, 7-3. CEGB test on h.v. units, 3-11. Current limiting, functions of (letter), 6-13. Gas unit pressure regulation, Merlin & Gerin, 10-21. Heavy duty, 3-Focus 15.
Interruption behaviour, 2-45. Miniature and moulded case for control, 3-Focus 21. Synthetic testing, ASTA report, 15-46. Synthetic test, Assoc. of Short circuit testing Authorities, 12-4. Testing, 3- Focus 29.
Codes of Practice:
Assoc. of consulting engineers warning, 8-7
Colour codes:
BEAB requirements, 10-5. Consumer Council on date for change, 11-9. Flex changes, IEE regulations, 16-3. Flex colour regulations, 12-3. Flex, publicity, 26-7. Tea towel, 20-8.
Companies:
Kenton storage heaters discontinued, 4-7.
Company News:
1-4, 2-39, 3-4, 4-4, 5-4, 6-6, 7-4, 8-6, 9-4, 10-6, 11-8, 12-6, 13-8, 15-4, 14-4, 16-6, 17-8, 18-8, 19-8, 20-4, 21-6, 22-4, 23-6, 24-4, 25-6, 26-4.
Computers:
For electrical machine design, 13-50. In contracting industry, 22-61. Conference on aiding design, 21-46. Plessey, fast memory system, 24-14. Power systems, 9-Focus 22.
Conductors:
Aluminium terminals, 20-22.
Conduit:
Steel metrication, 26-7.
Confederation of British Industry:
Govt. housing policy criticism, 21-12.
Conference:
Heatex 69, 26-10.
Construction Industry Training Board:
Levies, differential, 14-7. Number of companies involved, 26-7.
Construction Sites:
Preferred supply 110 V, 1-5.
Consulting Engineers:
SET relief discussed, 22-7.
Consumer Council:
HP Amendment call, 8-4. Teltag label for bulbs, 12-13.
Container Ports:
Tilbury, 8-50.
Contracting:
Abroad (letter), 9-13. Accessory design improvements required, 22-78. Building accounts (letter), 13-16. 14-11. Bills of quantities (letter), 2-46, 7-12, 10-13. 18-14. 20-22. Bills of quantities, rate schedule letter 6-14. Bills of quantities, consultants view (letter), 9-13. Bills of quantities, Electrical Holdings view point, 9-50. Bills of quantities for small installations (letter), 7-12. Bills of quantities and surveyor's views, 10-73. BSI requirements, 7-59.
Cabling complexities, 22-88. CITB on differential levy, 13-5. Contractors' ideas on business, conference, 24-46. Criticism of contractors (letter), 1-10. Eastbourne conference, 23-51. ECA attack on Building Trade Employers on letting sub-contracts, 21-5. ECA document on daytime costs, 18-3. ERA report, 18-16. ETU on pay in Scotland, 15-3. Export prospects, 6-60. Fixing screws for boxes (letter), 26-11. Industrial relations, JIB viewpoint, 23-48. JIB industrial relations, 1-5. JIB new grade, 16-3. Late deliveries worry, 22-62. NBPI investigation of electricians salaries, 10-9. Metrication, question of leadership, 13-24.
Payment of sub-contractors (letter), 16-12. Pegwell Bay Hoverport, 22-56. Productivity drive, 22-72. Registration (letter), 9-13. Relations in industry (letter), 6-13. Registration of contractors (letter), 7-12. Safe electricity supplies for sites, 22-59. Safety in Building (letter), 23-15.
Scottish, JIB talks, 26-3. Scottish pay freeze, 17-4. Scottish pay increase refused, 13-5. Scottish talks on pay, 23-4. Scottish pay rise,

1-3. Service units for building sites, 24-50. SET refund, 14-7. Substations, term contracts for, 20-60. Systematic approach to estimating, 4-49. Tools, to cut installation time, 22-81. Wholesalers working with contractors, 22-91. Work overseas, 18-98.

Controls:
Luton Brewery, 23-56.

Cookers:
Blue Ribbon award, 6-5.

Cooking:
By electricity, 5-46.

Cooling Towers:
Ince, replacement for, 26-5. Institute formed, 18-11. Unit construction, 5-10.

Copper Industry:
Metrication date, 10-10.

Core Colours:
ECMC Ruling, 4-50. IEE Wiring regulations, 4-9.

Corrosion, atmospheric:
UK Map, 6-13.

Council of Science and Technology Institutes:
Council formed, 4-7.

Cranes:
For warehouses, 8-12.

Dampers:
Italian firms o.h. damper, 9-14.

Desalination:
Florida plant, 6-16.

Diesel generation:
Private, economics of diesel stations, 9-15. Bakelite xylonite plan for 32 plant, 14-3.

Diodes:
Silicon, cooling tin improvements, 20-12.

Distribution:
Planning and reliability, 26-54. System operation costs, 6-65.

Drives:
Auxiliary, for power stations, 24-Focus 15.

Earthing:
BR jointless electrodes, 14-44. YEB Policy (letter), 26-11. Yorkshire EB Policy, 25-52.

ECA:
Reorganisation agreement, 23-3.

Eddy Currents:
Couplings applications, 16-52.

Editor's Comments:
Co-operation helps international trading, 18-71. Diamond jubilee for illumination, 16-5. Distribution cable development revitalised, 17-47. Electrical equipment in hazardous areas, 26-47. Electrical industry in a metric morass, 13-49. Government support asked for plant ordering, 23-45. Lack of confidence in electricity's growth, 10-57. Lightshow and opportunities for lighting industry, 2-57. Little optimism in forward load forecasts, 12-51. NBPI wants tariff discrimination, 8-45. New option for storage appliance consumers, 3-45. Nuclear industry reorganised at last, 21-45. 1969 Presents a challenge to a confidence, 1-21. Programme for electrical metrication, 6-49. Rationalising earthing on distribution networks, 25-51. Representative of the Electrical Industry, 11-51. Sales approach to domestic consumers, 5-45. Semiconductors change machine characteristics, 4-34. Standardisation can mean confusion, 7-53. Superconductor machines, reality or fantasy, 14-37. The debate on bills of quantities, 9-47. The cost of reassuring customers, 15-39. Thyristor applications seen internationally, 19-51.

EEB:
Number of employees reduced, 18-11.

EFTA:
Appliance test pact, 13-3. Appliance tests, 7-3.

ELCB's:
Sensitivity, comment on Focus '68 (December), 1-10. Testing under arduous conditions (letter), 2-46.

Eire:
Supply Board industrial relations, 18-12. Turlough Mill contracts, 26-3.

Eire stations:
Kerry Shore, 6-8.

Electric Cells:
Production of hydrogen, 3-10.

Electric fires:
Frost, H. & Co., Rationalisation, 5-7.

Electric Light Fittings Association:
Exports to S. Africa, sales mission, 12-13.

Electric Vehicles:
Association speech on exports, 20-8. Fuel cell, Shell's work, 20-12. Hybrid car, 18-16. Post Office to introduce, 19-11. USA, Car, cost of, 5-8.

Electricaire:
Factory heating, 6-56. Survey of manufacturers' units, 5-55.

Electrical Power Engineers Association:
View of new electricity authority, 5-3.

Electrical Research Association:
Criticism of Government spending, 19-10.

Electrical steels:
Annealing improvements, 4-53.

Electrical Wholesalers Association:
Annual dinner speech, 13-11.

Electricity Council:
Day and Night Tarrifs, 6-3. Design of domestic hot water systems, 9-5. German loan sought, 16-5. Load forecast for 1974-75, 12-3. Overseas Borrowing, 8-5. Storage radiator sales arrive, 15-3. Work aids boards, Lingard talk, 19-5.

Electricity Sales:
Overcharging law, 19-3. To industry, 3-46.

Electricity Supply:
Figures for first quarter of 1969, 19-4. Legislation to cut costs, 11-57. Payment refusal by l.v. consumer, 24-7. Reorganisation report, 14-3. SSEB call for legislation changes, 25-3.

Electricity Supply Handbook:
Revisions to 1969 edition, 15-11.

Electrodialysis:
Benzhazi water plant, 14-4. Machining in, 14-3.

Electronics EDC:
Manpower study, 19-10.

East Midlands EB:
Reorganisation, 3-7.

Engineering Industries Association:
Deficit reported, 21-11.

Engineering Overseas:
Abu Dhabi, 3-6, 9-6, 15-7. African Continent, 2-40. Argentina, 3-6, 17-7, 1-6, 9-6, 13-7. Australia, 10-10, 12-10, 13-7, 16-9, 18-7, 20-6, 25-10, 26-6, 4-6, 21-6, 15-7. Bahamas, 13-7. Bahrain, 5-6. Belgium, 18-7. Bolivia, 18-7. Brazil, 13-7. Bulgaria, 3-6. Canada, 4-6, 7-6, 8-8, 9-6, 10-10, 11-7, 12-10, 13-7, 16-9, 17-7, 21-6, 20-6, 4-6, 1-6, 4-6, 5-6, 19-6, 25-10, 26-6, 19-6, 12-10, 17-7, 9-6, 11-7, 13-7, 9-6, 16-9. Chile, 1-6, 3-6. Columbia, 12-10. Czechoslovakia, 6-7. Ethiopia, 4-6, 22-6. Finland, 11-7, 24-6. France, 3-6, 17-7, 26-6. Germany, 3-6, 7-6, 8-8, 24-6, 25-10, 10-10. Ghana, 2-40, 25-10. Gibraltar, 18-7. Greece, 19-6. Hong Kong, 7-6, 12-10, 24-6. India, 7-6, 8-8, 11-7, 12-10, 20-6. Iran, 3-6, 14-6. Italy, 1-6, 4-6, 10-10, 16-9. Japan, 11-7, 12-10, 16-9, 23-8. Kenya, 2-40, 19-6. Korea, 19-6. Labrador, 1-6, 8-8. Lesotho, 7-6. Libya, 14-6, 26-6. Malaya, 4-6, 8-8. Mexico, 23-8. Mozambique, 17-7. Netherlands, 11-7, 23-8, 24-6. New Zealand, 20-6, 22-6. Nigeria, 6-7, 8-8. Norway, 5-6, 6-7, 20-6, 21-6. Pakistan, 6-7, 8-8, 12-10, 13-7, 22-6. Poland, 6-7. Portugal, 7-6, 23-8. Prince Edward Island, 12-10. Puerto Rico, 5-6. Rhodesia, 10-10. Russia, 6-7, 12-10. Sierra Leone, 25-10. Singapore, 18-7. S. Africa, 6-7, 9-6, 11-7, 14-6, 18-7, 19-6, 21-6, 23-8, 26-6. SW. Africa, 1-6, 13-7. Spain, 8-8. Swaziland, 22-6. Sweden, 2-40, 16-9, 22-6. Switzerland, 11-7, 16-9. Tanzania, 24-6. Trinidad and Tobago, 23-8. Tunisia, 20-6. Turkey, 1-6, 11-7. Uganda, 19-6. Uruguay, 11-7. USA, 5-6, 24-6, 10-10, 11-7, 14-6, 12-10, 16-9, 17-7, 20-6, 25-10. USSR, 2-40, 9-6, 19-6, 23-8, 24-6. Yugoslavia, 18-7, 20-6. W. Africa, 8-8. W. Germany, 5-6. Zambia, 19-6.

ERA:
Fuse research, 11-12. Report for 1968, 17-4.

ESCOM:
Expansion (letter), 10-13. Mining degrees required (letter), 6-13.

Electrical Trades Union:
Possible Merger with NUGMW, 1-4.

Europe:
Generation and transmission plan, 6-62. Hydro electric installations, 15-43.

Exhibitions:
Electronic Components Show, Olympia, 21-56. Lightshow 69, 2-67.

Exporting:
B.o.T. handbook, 20-5. BSI Guides, 12-9. ECGD, buyer credit, 23-7. Parsons experience, 23-53. Pifco comments on UK's bad name abroad, 19-5. Westminster Bank's Young Exporters award, 21-4. Exports—imports, 6-12. April 1969 figures, 24-15. February 1969, 14-12. January 1969 figures, 10-71.

Factory Inspectorate Electrical Branch:
Responsibilities, 26 Focus 19.

Fan heaters:
Sterling Domestic Appliances warning, 25-11.

Fans:
Deliveries, flameproof unit (letter), 14-11.

Farming:
Automation, 4-52. Royal Show 1969, 26-56.

Fault clearance:
Fast clearance times required, 10-67.

Faults, indicators:
OH lines, 11-13.

Faults, recording:
HV—IEE meeting, 11-59.

Fittings:
Purchase tax changes, 16-4.

Flame arresters:
Fire Research Station work, 12-5.

Flame-proof equipment:
Walsall Conduits film, 26-7.

Flex colours:
Controversy (letter), 2-46.

Fluidised beds:
BCURA combined cycle plant, 9-15. Electrodes for zinc air ceils, 8-13. NCB research, 18-106.

Focus:
Distribution cables, 17-50 (facing). Medium voltage switchgear, 3-48 (facing). Metrication, 13-52 (facing). Power stations, 24-48 (facing). Safety from explosion, 26-50 (facing). Standby-Supplies, 9-52 (facing).

Food industry:
Electricity sales campaign, 10-5.

France:
Linear motor and gas turbine train, 20-13.

Frequency changers:
Brushless, SMVA, 9-14.

Fuel cells:
Apollo 8, 10-11. For Trinity House, 2-45. General review, 9 Focus 12. Shell research, 20-12.

Fuel Industry:
Five year planning, 19-10.

Fuel policy:
Government mathematical model of UK energy economy, 5-48.

Furnaces:
Ladle, Sweden, 24-49. Temperature control, Birmingham University, 18-16. D.C. electrodes test, 26-10.

Fuses:
IEE Regulations comments (letter), 23-15. For thyristors, 6-61. Research, ERA comments, 11-12.

Galvanising:
Ebbw Vale £4 million line, 12-62.
GEC Switchgear:
Whitton factory closed, 23-3.
Generation:
Leading p.f.—CEGB practice, 3-11. Air-cored magnetic circuit, 21-15. Diesel, Southern Newspapers savings, 20-54. Divided windings advantages, 16-55. Excitation by thyristor, 11-52. Lightweight for US Army, 10-22. Operation in unstable region, 15-12. Overvoltages, 19-60.
Site testing, 7-54. Steam plant, future trends, 19-61. Steel foundations for 40 MW sets, 4-51. Thyristor, excitation for, 11-52, 15-40. Turbo-type, future designs, 24 Focus 6. Water wheel, 7-54.
Germany:
Appliance Sales, 6-5. Cologne Fair, 6-5.
GLC:
South Bank complex, 22-94.
Government legislation:
Control of rationalised industries, 25-5. Labour-only contracting, 25-9.
Gravesend:
Civic centre, 8-57.
Green papers:
"The task ahead, electricity consumption forecast," 10-3.
Guernsey:
Off-peak load station, 20-3.

Harrogate:
Appliances review, 5-60.
Heat Exchangers:
Plastics in, 21-15.
Heat reclaim:
MANWEB Chester HQ, 25-58.
Heated bushings:
For switchgear, 11 kV (letter), 16-12.
Heated tiles:
Pig rearing, 10-68.
Heating Processes:
Sales of ICI's flexel for ceilings, 23-4. Developments, USA conference report, 23-46.
Heating and Ventilating Research Association:
System reliability prediction, 19-11.
Holland:
Flero station, 6-67. Heated tiles for pig rearing, 10-68.
Holograms:
Storing, 7-13.
Honours:
Birthday, 1969, 25-13.
Housewiring:
Simple kit from Cowray, 1-5.
Humidifiers:
For healthy environments, 5-49.
HVDC:
Radio interference from, 12-66.

IEE:
Corporate membership, experience required, 20-3 and 20-7. Meeting of European Institution, 4-7. Membership, value assessed, 23-11. University education speech, 9-8.
IEE Conferences:
Power thyristors and their applications, 19-52, 20-65, 21-53.
IEE Regulations:
Core Colours agreed, 4-9. Metric wiring supplement, 2-37.
IEETE:
Membership growth 1968-69, 24-7.
India:
Supply estimates, 11-63.
I Mech. E:
Merger with I plant engineers, possibility, 9-7.
Industrial Reorganisation Corp:
GEC-AEI plans, 26-8.
Industry:
Need to attract manpower, 9-65.
Instrumentation:
Calibration tester at UMIST, 7-13. Infra-red temperatures, Texas Inst., 24-13. Instrument for ice warning (Teddington Aircraft Controls), 5-11. Monitoring flue gas dust, 4-11. Repair, windowless factory, 21-50.
Inst. Plant Engineers:
Merger with I. Mech. E. possibility, 9-7.
Insulating oils:
Test meter, 3-48.
Insulation:
Compressed gas, 6-68. Discharges within, 2-61.
Insulators:
CERL tests on resin-bonded, glass fibre units, 16-66. CERL work on resin-bonded, glass fibre, 10-21. Flashover prevention, 24-14. Oil baths, CEGB trials, 19-13.
International Commission on Rules for the Approval of Electrical Equipment:
Regulations on coffee mills, grinders, radio interference suppressors, 24-3. Meeting with BSI, 20-3.
Intrinsically safe equipment:
Flame arresters, 26 Focus 15. Inspection and testing, 26 Focus 19. Research at ERA, 26 Focus 9. Standardisation, 26 Focus 3.
Investment:
Foreign investment in UK, Ferranti criticism, 18-4.
Inverters:
Static, for emergency power, 9-Focus 19.
IPC:
Industry Services International, 20-8.
Iran:
Sugar factory installation, 18-78.
Italy:
CESI synthetic testing plant, 7-8.

Japan:
BEAMA trade mission, 9-7. Investment in generators, 17-50. TNPG co-operation with, 22-6.
JIB:
Bonus system criticisms, 23-4. Death benefit scheme, 22-5. Education tests enforced, 8-3. General effectiveness in contracting, 22-68. Industrial damage warning from Electrical Contractors Association, 8-7. New grade, 16-3.
Jointing:
By explosion, for h.v. lines, 17-15.

Kettles:
Which? test, 7-12.

Lamps:
BLI on resale prices, 5-3. Long-life, Crompton to market, 4-3. Table, danger of metal lamp with 2-core cable, 4-6. USA Manufacture for 1968, 8-4.
Lasers:
EHV Current measurement, 5-10. HV pulse measurements, 19-13.
London EB:
Newcross Tunnel, 25-4. Wandsworth showroom, 8-4.
Legislation:
New electricity act, 11-57.
Libraries:
National Libraries Committee report recommends changes, 25-11.
Lifts:
Great Orne Chair, 10-11. London Airport, 2-45. Safety regulations, 17-4.
Lighting:
Automatic photometry for lamps, 25-64. Booklet *Interior Lighting Design*, 24-8. Building sites, 19-63. Caernarvon Castle, Manweb, 21-11. Emergency (letter), 26-12. Exports increase, 17-5. For colour t.v., 11-68. Guide on levels in offices, 7-7. IES jubilee, 16-3.
Integrated, US installation, 5-58. Lamp development, diamond jubilee lecture, 7-67. New journals announced, 23-5. Teltag labels for bulbs, 12-13. Trafalgar Square floodlighting, 18-4.
Lighting Codes:
Criticisms by Capenhurst Director, 4-48.
Lighting, integrated:
Government offices at Kew, 8-60.
Linear motors:
Russian monorail installation, 12-15. Use in cranes, 1-11.
Lloyds:
Industrial work, 16-65.
Load flow:
Imperial College paper on supply systems, 13-54.
London:
New Bridge heating and lighting, 7-69.
London Transport:
Expansion plans, 18-4. Fleet line, 25-9. Gas turbines for Greenwich Station, 16-5. Victoria Line, 10-58.

Machines:
Ferroresonant parametric, 21-49. Linear characteristics, 15-13. Range offered by English Electric-AEI, 16-10. Silencing, 9-53.
Machining:
Electro-chemical, 18-15.
Magnetic structures:
International R & D examination, 10-21.
Magnetohydro-dynamics:
IRDC Rig, 17-11.
Manpower:
Need for action by industry, 9-65.
Manufacturing:
BICC, RTZ and Kaiser Aluminium, Anglesea factory, 10-6. Cables, rationalisation talks, 22-3. Delivery dates defended by BICC, 18-3. Electrical products output for Sept.-Dec. 1968, 23-7. Forecast for long term, 1-22.
GEC—rationalisation and company reorganisation, 3-5. Generators UK, USA talks, 25-30. Lamps, no Restrictive Practices Court investigation on overseas trading, 20-3. Product information, 16-63, 17-56. Reyrolle Parsons move to Edinburgh, 21-3.
Manweb:
Caernarvon Castle floodlighting, 21-11. Chester centre, 9-5. Chester HQ, heat reclaim, 25-58. Distribution expansion plans, 4-5. White meter tariffs, 7-3.
Maximum demand:
Electricity Council Mid-70's estimates, 12-3.
MCB's:
"On" and "Off" considerations in, 23-15.
Measurements:
EHV current and voltage, 14-13.
Midlands EB:
Construction progress indicator, 3-7. Control of Birmingham distribution by computer, 4-5. Control of storage heaters, 11-4. Fire at Mucklow Hill, 6-3. Monthly installments pay scheme, 23-5. New administrative areas, 16-5. Productivity pay, 26-5. Reorganisation date, 6-5. Reorganisation in April 1970, 20-5. Thermal efficiency record, 9-5.

Mergers and take overs:
International research and development, responsible to Reyrolle Parsons, 8-30. Possibility of I. Mech. Engineers and I. Plant Engineers, 9-7. BNDC, Brown Boveri, 22-6. Electric Light Fittings Association and Electric Lamp Industry Council, 5-3. Reyrolle Parsons & Bruce Peebles, 14-3. Siemens and AEG link, 14-4. Siemens, Allis Chalmers, 2-37.
Metal foil:
Power failure, legal action by British Celanese, 15-8.
Meters:
Certification (letter), 13-16. External reading cabinets from boards, 12-5. Readings, National Board for Prices and Incomes investigation, 8-3.
Metrication:
Board members named: 22-7. BSI programme, 4-7, 13 Focus 3. Cables, BICC work, 13 Focus 13. CEGB's plans, 21-5. Construction industry training booklet, 10-9. Contracting Industry, 13 Focus 24. Copper industry, 10-10. Costs (letter), 10-13. Dates given for sectors of electrical industry, 5-3.
Focus on, 13-52 (facing). IEE 14th wiring regulations, 11-3. IEE Wiring Regulations, 11-62. Industrial engineering considerations, 13 Focus 9. Industrial engineers viewpoints on contracting industry, 13 Focus 19.
MPBW Pamphlet, 5-8. MPBW ruling on contractors' materials, 20-7. SSEB's views, 2-41. Steel conduit, 26-7. Supply industry, 2-37. Timetable for industrial change-over, 6-55.
Microwaves:
Heatex 69 conference, 26-10.
Moisture measurement:
In soil, 5-11.
Monopolies Commission:
Report opposing recommended resale prices, 9-7.
Motors:
Delivery delays, 21-3. Die-cast yokes, Brook Motors, 14-13. Semiconductor applications, 4-44. Brushless, electronic switching circuits, 21-16. Fractional h.p. shortage report, 26-8. Linear, in train with gas turbine sets, 20-13. Linear, Mechanical handling with, 23-14. Micro-step, Radar Establishment work, 13-24. Rotating magnetic fields, 20-12. Reluctance, Thyristor switching, 24-13.
Shunt, BR investigation, 3-10. Starters for, automatic winding, 14-14. Superconducting helium freezer for 3,000 h.p. motor, 7-13. Progress with 3,000 h.p. units, 14-38. Synchronous, solid pole motors at starting, 11-67. Fraction, wafer brushes for commutation, 9-14.
MPBW:
Agrément Board and IEE Wiring Regulations, 1-3. Metrication pamphlet, 5-8.

Natural Gas:
NBPI call for price fixing, 8-9.
Navigation:
Omega System, 7-14.
NCB:
Coal price increase, 22-8.
NEB:
Computer purchased, 7-5.
New Year Honours:
For 1969, 1-8.
New Zealand:
Central Highland hydro development, 24-51.
National Joint Industrial Council
Union membership agreement, 26-3.
N. Ireland Authority:
One body planned, 2-38.
N. Ireland JEA:
Pumped storage feasibility, 25-4.

Norway:
Explosion jointing h.v. cables, 17-15.
Notes on Wiring:
1-34, 3-50, 5-17, 7-60, 9-58, 11-64, 13-58, 15-44, 17-51, 19-64, 21-52, 23-58, 25-24.
NRDC:
Rubber strain guage, 15-12.
NSHEB:
Annual report 1968-69, 25-57. Foyers scheme approved, 9-3. Loan sought in Europe, 24-3.
Nuclear Engineering:
CEGB interest in h.t.g.r's, 22-3. Criticism of Treasury's attitude, 24-8.
Nuclear stations:
Battery standby, 20-7. CEGB report on sound economy, 25-4. Dounray, 17-11, 18-11. Dungeness B, two nuclear companies co-operate, 21-3. Government reorganisation plans, 17-13. Hunterston B, 24-7. Life expectations of a.g.r., 13-4. Load factors, 24-7. Min. of Power cost calculations, 14-5. Oldham, 24-52. Trawsfynydd, 19-4.

OECD:
Generation and transmission plan, 6-62.
Outlook:
"Brightening the image of electrical wholesalers," 16-69. "Cost of living index for qualified staff," 8-71. "Don't under-estimate application forms," 21-59. "Electrical engineering for London Transport, 15-51. "Engineering courses in Britain's technical colleges," 22-95. "Engineering improves training performance," 12-71. ESCOM'S expansion plans, 2-35. "Facing up to recruitment problems," 3-55. "Finding an easy way to recruit graduates," 23-59. "Future of the technological qualifying associations," 25-69. IEETE Membership shows education and experience," 4-65. "Increased emphasis on management training," 6-75. "Is your marketing team fully appreciated?" 14-55. "Job and man descriptions—optimistic, but flexible," 9-63. "Keeping engineers in touch with other technologies," 18-115. "Keeping your salary in line with living costs," 26-61. "Looking for the electrical buyer," 7-73. "Providing new courses for modern technologists," 19-67. "Recruitment problems? examine your advertising," 17-61. "Room at the top for engineers," 11-73. Salaries in universities, 1-27. "Streamline selection of GPO Engineers," 5-71. "Training technologists for the engineering industry," 10-79. "Ways of cutting down on staff wastage," 13-63. "Working for a small firm has great advantages," 20-71. "Why you didn't get that new job?" 24-59.
Ovens, Microwave:
NRDC research backs Dysona industries, 25-11.

Packaged power systems:
For overseas, 18-101.
Paints:
Electrically conducting, 20-13.
Panels, distribution:
Specifications for (letter), 26-21.
Peak lopping:
Southern Newspapers use of diesel generators, 20-54.
People:
1-8, 2-42, 4-8, 5-9, 6-11, 7-11, 8-10, 9-11, 10-12, 11-10, 12-14, 13-15, 14-18, 15-8, 16-11, 17-14, 18-13, 19-12, 20-11, 21-12, 22-8, 23-12, 24-11, 25-12, 26-9.
Physics Exhibitions:
Summary 1969, 11-61.
Plasma torches:
Rail cleaning, BR usage, 20-13.
Plugs, domestic:
Glasgow stores sell dangerous plugs, 15-4.

Post Office:
Advisory group on telecoms, 7-6.
Power sources:
Radio isotope, 6-16.
Power stations:
Auxiliary drives, 24 Focus 15. CERL work on dust, 25-15. Focus, 24-48. (facing) Industrial, economics of, 12-52. Instrumentation, 24 Focus 21. Refuse-fuelled, Bristol examination, 26-8.
Power systems:
Energy storage, 15-48.
Private generation:
Advantages (letter), 13-18. English Electric figures of savings, 9-15.
Products and Appliances Launch:
1-13, 2-49, 3-13, 4-13, 5-13, 6-17, 7-17, 8-15, 9-15, 10-15, 11-17, 12-17, 13-19, 14-15, 15-15, 16-15, 17-17, 18-19, 19-15, 20-15, 21-19, 22-13, 23-17, 24-17, 25-17, 26-13.
Pumped storage:
Foyers scheme approved, 9-3. IEE meeting on, 15-48. North of Scotland Border planning, 10-4. World wide assessment, 2-60.

Quality testing:
Sheet steel permeability monitors, 17-14.
Queen's awards:
For 1969, 17-5.

Radar:
Mini, Royal Radar Establishment, 22-11. Radome inflator protection, 4-11.
Radiation:
Infra-red detectors, 1-11.
Radio interference:
Conductor designs (letter), 21-17. Harding article (letter), 26-12. HVDC factors, 12-66. HV lines, 19-56.
Railways:
B.R. report for 1968, 23-11. Jointless electrodes for earthing, 14-44. Manchester line voltage increase, 24-8.
Reactors:
Test in US for spare usage, 21-15.
Rectifiers:
B.R. usage, 1-11. Characteristics, 2-58. Westinghouse exports, 12-67.
Redundancies:
EE move at London HQ, 4-3. GEC, 6-3.
Refining:
Haydock automatic control, 25-9.
Refrigerators:
Number of owners in UK, 5-7.
Regrouping:
GEC—Elliott, 7-8.
Regulations:
Electrical installations in petroleum stores, 12-61.
Relays:
Fast three-step, 2-63. Simulating operation, American Westinghouse, 25-15. Testing i.d.m.t. units, 12-65.
Research:
Southampton University work, 14-49.
Resins:
USA developments, 20-12.
Resistors:
Squeezable, 6-15.
Ring circuits:
Warning on overloading, 7-6.
Ripple control:
Montpellier substation, 21-5.
Ronan Point:
NWEB action following, 11-4.
Rubber:
Strain gauge, 15-12.
Russia:
Survey of generation, 6-50, Generator development, 7.65. Monorail with linear motor, 12-15.
Rutherford Laboratory:
Annual report 1968, 22-92.

Safety:
Electrical Aids, 8-66. Institution of Industrial Safety booklet, 6-8. Sales, Appliances, Boards sales in 1968, 13-11.
Scotland:
Electricity demand forecast, 5-5.
Seeboard:
Centralised store, 2-41. Hove HQ, 12-4. Reorganisation from three- to two-tier structure, 11-3.
SET:
Cambridge University enquiry into effect, 25-9. Criticism by Electrical Contractors Association, 17-3. Refund for contractors, 14-7.
Short circuit limiters:
Shell refinery, 10-4.
SI Units:
International adoption difficulties, PERA conference, 26-51.
Southampton University:
Research work, 14-49.
South Africa:
ELFA Mission for lighting exports, 12-13. Johanneburg per capita electricity consumption, 23-13. Phosco's associate company, 10-4.
South Western EB:
All-electric village, 26-7. Offices for future, 16-4.
South of Scotland EB:
Annual report 1968-69, 25-60. Nuclear group may build oil-fired plant, 8-5. Reorganisation, 7-5. Sites for five oil-fired stations recommended, 5-5. Views on metrication, 2-41.
Standardisation:
ASTA certify foreign standards, 15-3. Explosion-proof equipment, 26-Focus 3, Microfilm system of Data Highways, 6-8. Supply Industry's incorporate BSI work, 6-4.
Standby supplies:
Gas turbine and diesel plant, 9-Focus 5, Standby supplies, Focus, 9-52 (facing).
Static Power systems:
For computers, 9-Focus 22.
Steel:
Arc furnace refining, 24-13. Price increase, 25-3. MEB ripple control, 11-4. Price revision, 17-3. Six year plan, 5-8. Contracts awarded for Shepcote Lane Mills, 9-5.
Storage radiators:
Survey of manufacturers 8 and 11 h units, 5-50.
Substations:
Isolating link tests, MV systems, 19-13. Mobile unit in Canada, 5-10. Ripple control for Montpellier, 21-5. Term contracts, 20-60.
Sunlamps:
Which? test, 19-10.
Superconducting:
Generators, 21-15. With air-cored magnetic circuit filamented, 12-15. Rotors with high magnetic fields, 23-13.
Superplastic Metals:
Alloys developed, 8-12.
Supply Industry:
Clerical pay awards, 9-5. Metrication, 2-37. Research benefits to overseas buyers, 18-72. Staff pay rise, 3-8.
Sweden:
ASEA trade with UK, 24-5. Ladle furnace, ASEA-SKF, 24-49.
Switches:
Fuse, 3-Focus 9. Arc phenomena, lack of knowledge, 17-58. For power stations, 24 Focus 12. GEC rationalisation, 18-20. Heated bushing, 11 kV (letter), 14-11. Heated bushing for 11 kV units, 12-15. Isolator, SF_6, GEC Tests, 21-26. MCB's testing, 10-61. Medium voltage, 3-48 (facing). MV, choice of, 3-Focus 3. MV, research, 3-Focus 23. Rationalisation of GEC transmission switchgear, 7-15. Synthetic testing of c.b's (letter), 21-17.
Tariffs:
GEGB, bulk, 13-3. Day and night, 6-3. Emcon conference on white meter, 7-5. LEB and SSEB rates, 10-4. LEB "floor area" basis, legal approval, 10-4. Time-of-day, boards' policies, 3-3. White meter, 12-57. White meter, boards' figures, 11-4.
Taxation:
National Research Development Corporation criticism, 12-9.
Telephones:
Manufacturers criticised by Minister, 7-8.
Television:
Studio lighting, 11-68.
Testing:
Backstone engine test house, 13-12. Hawker Siddeley's Woodford Laboratory, 16-10.
Textiles:
Protection from electrostatic charges, 20-13.
Thyristors:
For d.c. switching, 7-14. Excitation, large generators, 11-52. Fuses to protect, 6-61. For generator excitation, 15-40. Heavy neutral currents, 25-61. Power, IEE Conference on applications, 19-52, 20-65, 21-53. Oil cooled h.v.d.c. valve, 8-12.
Tidal stations:
Protection of, 3-11.
Tiles:
Cowie plant, 26-51.
Tissue Production:
Factory distribution system, 3-51.
TNPG:
Reorganisation, 4-3.
Total energy:
Air conditioning systems, 6-52.
Traction:
High-speed US train, 6-15.
Trade Descriptions Act:
Ward & Goldstone appeal, 26-6.
Trade Marks:
American GE and GEC legal action, 14-3.
Training:
Central training Council report, 11-9. Reducing barriers, association's work, 18-105. Contractor training by A. S. Lowry, 8-7.
Transformers:
Cases evolved, 3-10. BEAMA booklet on noise measurement, 19-11. Gas-aborbing oils, 2-46. Failure prediction by gas analysis 13-24. For e.h.v., 18-93. Radiator performance tests (Tube Investments), 25-15.
Transients:
Measurement at h.v., 9-14.
Transmission:
CEGB engineer reports on supergrid, 15-45. Preparation for 1 MV, 26-48. Research at 1 MV in USA and Sweden, 6-16.
Turbines:
Electrolysis for repairs, 7-14. Frankel of EE-AEI examines exports, 10-9.
UKAEA:
Centrifuge fuel processing, 2-46. Dounray, aluminium cable, 10-11. Harwell to work for industry, 3-6. Reorganisation, 10-9.
Underfloor heating:
Pig rearing, 10-68.
Universities:
Aston research, 20-57. Bristol, research, 25-62.
Uranium:
World production, 14-5.
USA:
Aluminium production, 12-15. CB's, vacuum, 25-15. Dam tests earthquake simulation, 26-10. GE discontinues monogram label in UK, 24-3. Electricity generation, 1968, 12-56. GE offers business opportunities, 25-11. GE wins trade mark battle against GEC, 14-3. High speed train, 6-15. High temperature resins developed, 20-12. Lamps, manufacture for 1968, 8-4. Lightweight generators for army, 10-22. Lord Nelson warning on size of electrical firms, 17-3. Nuclear reactor licencing costs difficulties, 23-5. Pumped storage, 1 GW scheme, 24-13 Reactors in space vehicles, 21-15. Relay operation simulation, American Westinghouse, 25-15. Sodium distribution cables, 16-13. Tanners Creeks, video/audio link, 2-45.
USSR:
Survey of generation, 6-50. Generator development, 7-65. Monorail with linear motor, 12-15.
UWIST:
Wolfson grant for research, 2-38.
Victoria Line:
Opening, 10-58.
Warehousing:
Crane elevators, 8-12.
Weighbridges:
Electronic, at Blyth B station, 26-10.
Welding:
Ultrasonic probe crack-detector, 18-15. Ministry of Power warn of shock dangers, 18-5.
Which?:
Cooker tests, 3-8. Kettles test, 7-12. Sunlamps, 19-10.
White meters:
Selection types, 12-25.
Wholesaling:
Federation conference, 13-55.
Wiring:
In the home (letter), 11-11. Overseas (letter), 11-11. Wood preservatives risk to insulation (letter), 21-17.
Wiring regulations:
Flex colour changes, 16-3. IEE amendments, 10-72. IEE 14th wiring regulations, 11-3.
Women:
Minister calls for more engineers, 11-10.
X-rays:
Crawler unit for pipes, 23-13.

Printed in England by James Cond, Birmingham and London